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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,033	11/29/2001	Karen I. Trovato	US010617	6840

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER	
BAYERL, RAYMOND J	
ART UNIT	PAPER NUMBER
2173	

DATE MAILED: 12/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/998,033	TROVATO ET AL.	
	Examiner	Art Unit	
	Raymond J. Bayerl	2173	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 October 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 24* is/are pending in the application.

4a) Of the above claim(s) *21 - 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 - 3, 5, 9, 11 - 13, 15 - 20, 24* is/are rejected.

7)☒ Claim(s) *4, 6 - 8, 10, 14* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 March 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The disclosure is objected to because of the following informalities: in the brief description of the drawings, "fig 5" does not correspond to the actual drawing figures 5A, 5B, 5C, 5D. This is also a problem at page 5, lines 14; page 12, lines 3, 5. Also, the summation formula expressed at page 5, line 14 does not have a complete set of iteration indices (e.g., I=1, n) on the upper and lower sides of the capital sigma character. Appropriate correction is required.

2. Applicant's election without traverse of claims 1 – 20, 24 in the reply filed on 7 October 2004 is acknowledged. Claims 21 – 23 are withdrawn from consideration as being directed to a non-elected invention.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 5, 9, 11 – 13, 15 – 20, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu ("Liu"; US #5,953,005 A) in view of Fujita et al. ("Fujita"; US #6,600,874 B1).

As per independent claim 1's "synchronizing visual information with audio playback" (see also independent claim 24), Liu teaches that MULTIMEDIA ACCESS can be obtained via a Karaoke application…where the user desires to access songs which are most popular at a given time (Abstract ;col 2, lines 34 – 52). In the Javaoke arrangement taught by Liu (see figs 2, 4), "receiving a user selection of a desired audio file", followed by "initiating play of the desired audio file" takes place—the chosen song plays at box 134, fig 7 (col 6, lines 28 – 40). Since the Javaoke Applet runs at a display browser such as in fig 2 (and therefore is disclosed as capable of "displaying visual information associated with the desired audio file" in the form of lyrics 102, fig 4), "the commencement of playing the desired audio file and the commencement of the displaying step are a function of a signal from the display device".

Liu does not enter in such specifics of Karaoke as those that would **explicitly** read upon the claimed use of "timestamp data such that the visual information is displayed synchronously with the playing of the desired audio file", though such an application has at least an implication that some form of matching lyrics to position in the song duration is required.

However, Fujita, in DETECTING STARTING AND ENDING POINTS OF SOUND SEGMENT IN VIDEO by obtaining a thresholded envelope of a sound signal waveform (Abstract) must make note of time point data, as described at

col 14, line 53 – col 15, line 45. A time point as per Fujita reads upon a reasonably broad interpretation of the claimed "timestamp", since both are used to mark a position in time that is pertinent to a later process.

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of applicant's invention to use a "timestamp data" collection as per Fujita, in conjunction with the Liu Javaoke arrangement , where control from the "display device" reads out a "desired audio file" along with "visual information", the motivation being to arrive at the correct timing for lyrics in the Liu Karaoke application.

As per claim 5's "analyzing the audio file" in order to produce such "timestamp data", this is a central focus of Fujita, as noted above—please note the involved processing to generate an "envelope", as in Fujita's fig 3. Encoded within the timing of the audio will be "tempo information extracted from music" (claim 9).

As seen in Liu's fig 2 (see also col 4, lines 13 – 33), "the visual information comprises text lines" (claim 11), and also the "title of the desired audio file" (claim 12).

As in claim 13, the song choices in Liu are "from a list stored in memory associated with the display device": the host servers as seen in fig 1 are disclosed as being so "associated". When the Javaoke applet is invoked in Liu, "a signal" is sent "from the display device to a remote device to cause the remote device to start" (claim 15).

Independent claim 16 chooses to concentrate on the audio analysis aspect of the present invention, as it relates to a "segment" that "may be displayed synchronously with the audio playback" in the style suggested by Liu. Specifically, an "acoustic feature" and "pauses" are found "within the audio data", for the purpose of "segmenting the audio data" and then "generating at least one timestamp value". But such analysis, as noted above, is also a central feature in Fujita, where a segmented representation such as that in window 315, fig 3 (see also fig 4) is made from the input waveform.

When "the at least one segment" as found in Fujita is used to direct the lyrics of Liu, the "segment refers to lyrics of a song" (claim 17), and such "differentiation", according to the song's author's intentions, will be between those for "one of the male gender and the female gender" (claim 18).

As per claim 19's "indication of a tempo of the visual information", such information will be imparted to the Liu display, on the basis of the underlying "tempo" in the Fujita input audio. Fujita's analysis, as noted above, produces a thresholded signal that "separates the audio data into voice segments and non-voice segments" (claim 20), when "non-voice segments" takes the reasonably broad interpretation of low audio level or silence.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Fujita and Sai et al. ("Sai"; US #5,691,494 A).

The Liu connection from "display device" to the audio source is not **explicitly** shown as being "an infrared signal". However, Sai's highly analogous

technique for PROVIDING KARAOKE SERVICE uses a commander 5 of an infrared remote control type at the Karaoke Box location (col 3, lines 37 – 50).

It would have been further obvious to the person having ordinary skill in the art at the time of applicant's invention to implement the Javaoke control as per Liu/Fujita via an "infrared signal", with the motivation being to avoid unnecessarily cumbersome wiring.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Liu in view of Fujita and Ng et al. ("Ng"; US #5,648,628).

Liu, while having a "display device" that is capable of supplying "a signal", is not **explicitly** disclosed as using "a handheld device". However, Ng's KARAOKE DEVICE, with an LCD screen for displaying the title and lyrics of the song (Abstract), uses a console as illustrated in fig 3, in a portable configuration (col 2, lines 37 – 39).

It would thus have been finally obvious to the person of ordinary skill in the art to use Ng's portable (and thus, "handheld") "display device" to achieve the "timestamp"-oriented "displaying" of Fujita's modification to Liu, with the motivation being to enable a less-restricted placement of users within a given area.

8. Claims 4, 6 – 8, 10, 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per claim 4's "signal" that "turns the remote device off and on prior to the remote device playing the desired audio file", the best prior art of record when

it comes to invoking "audio playback" is Liu, where user selection starts the program—but with no teaching or suggestion that any equipment has its power so cycled.

As per the three procedures in claims 6 – 8 by which "timestamp data is generated"—by "a text based process", "pronunciation dictionary process" or "a note transcription of music process"—the best prior art for this kind of limitation would be Fujita, where "timestamp data" *per se* is assigned to time points. However, the typical prior art determination of timestamp codings as seen in Fujita merely uses numerical and logical calculations, and not these higher-order considerations.

A similar line of reasoning applies to "adjusting the location of the extracted keyword to match the location of the keyword within the timestamp data" (claim 10). While a Karaoke application such as Liu's will invariably match "keyword" locations *per se* to "timestamp data" as found in Fujita, it is not done with such "adjusting".

Finally, as per claim 14, and the employment of "a random number selection method" for "selection", the prior art of record such as Liu, being directed as it is towards user-desired song selection or the publishing of sales charts to suggest popularity, does not teach or suggest "random number"-driven choices of this kind, in the context of the overall parent claim 1.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The remaining US Patent documents made of record (see attached form PTO-892) are directed towards systems in which audio content is matched to visually-oriented presentations.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond J. Bayerl whose telephone number is (571) 272-4045. The examiner can normally be reached on M - F from 9:00 AM to 4:00 PM ET.

11. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cabeca, can be reached on (571) 272-4048 thereafter. All patent application related correspondence transmitted by FAX **must be directed** to the central FAX number (703) 872-9306.

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

RAYMOND J. BAYERL
PRIMARY EXAMINER
ART UNIT 2173
30 November 2004